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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
DIBRINO, MARIANNE NMN	
ART UNIT	**PAPER NUMBER**
1644	

DATE MAILED: 04/19/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/810,310	KHLEIF ET AL.	
	Examiner	Art Unit	
	DiBrino Marianne	1644	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *02 February 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,2,6-8,11,12,14-17 and 32* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,2,6-8,11,12,14-17 and 32* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 2/2/06 has been entered.

Applicant's amendment fled 2/2/06 is acknowledged and has been entered.

Claims 1, 2, 6-8, 11, 12, 14-17 and 32 are presently being examined.

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claim 32 is rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected to make and/or use the invention.

The specification does not disclose how to use the instant invention, a method for eliciting an immune response to an HIV antigen in a subject, said method comprising an immunogenically effective amount of a peptide or protein antigen, said antigen comprising one or more CTL epitopes of HIV, coordinately with a non-viral vector comprising a polynucleotide encoding at least one of a B7-1, B7-2 or B7-3 co-stimulatory molecule, wherein the non-viral vector and peptide or protein antigen are separately administered to closely adjacent sites.

The specification has not enabled the breadth of the claimed invention because the claims encompass a method for treating HIV infection.

The disclosed use of the method is for "supplementing and enhancing peptide- and protein-based vaccines and treatment methods...[using] at least one CTL epitope capable of eliciting a specific T cell response in the subject...coordinately administered with a non-viral vector that incorporates a polynucleotide encoding one or more co-stimulatory molecules..."(specification on page 6 at lines 29).

The state of the art is such that it is unpredictable in the absence of appropriate evidence whether the claimed method can be used for treatment. The specification discloses no working examples with regards to the use of the instant invention for treatment of disease *in vivo*.

The specification discloses that a secondary "co-stimulation" signal is required for optimal stimulation and effective antigen specific clonal expansion of lymphocytes in addition to a primary antigen specific signal, and that a two signal model has been proposed for all lymphocytes (page 3 at lines 14-19). The specification discloses that the primary activation signal typically involves and antigenic peptide bound to either class I or class II MHC (page 3 at lines 20-22). The specification discloses that T cell co-stimulation is thought to be provided by one or more distinct cell surface molecules expressed by APC, and is thought to involve binding of co-stimulatory molecules on the surface of APC to a corresponding T cell ligand (page 3 at lines 30-33 and continuing on to page 4 at lines 1-10). The specification discloses that B7 is one co-stimulatory molecule for T cells and is a counter receptor for CD28 and CTLA-4 (page 4 at lines 11-23), and that two additional receptors related to B7 (B7-1), are B7-2 and B7-3 (page 5 at lines 5-8). The specification further discloses along with B7-1, B7-2, B7-3, that B7H, ICAM1, ICAM2, ICAM 3, LFA1, LFA2 and LFA3 are co-stimulatory molecules (especially page 7 at lines 17 and 18). The specification discloses immunizing mice with a peptide antigen emulsion, *i.e.,* an HPV E7 peptide, followed by an intradermal injection of B7-encoding DNA plasmid vector (especially Example 1). The specification further discloses measuring CTL extracted, *i.e., ex vivo*, from the said mice for immunoreactivity to the E7 immunizing peptide and an increased effect when B7-encoding DNA plasmid vector was coordinately administered with the peptide antigen. The instant specification does not disclose treatment of subjects with peptide antigens other than the aforementioned HPV E7 peptide antigen and a non-viral vector encoding a co-stimulatory molecule other than B7.1. The specification does not exemplify treatment or prophylaxis of HIV infection *in vivo* by injecting a B7-1, -2 or -3-encoding DNA or RNA plasmid vector and at least one HIV CTL epitope in the method recited in the instant claims.

There is insufficient evidence that such a study if extended to HIV CTL epitope(s) would correlate with *in vivo* efficacy in humans. It is well known in the art that retroviral therapies, especially HIV therapies, are refractory to anti-viral therapies (see Fahey *et al.,* Clinical Experimental Immunology, 1992; Letvin, Science, 1998). The obstacles to developing a successful therapy of HIV are well documented in the literature. These obstacles include 1) the extensive genomic diversity and mutation rate associated with the HIV retrovirus, particularly with the respect to the gene encoding the envelope protein. 2) The fact that the mode of viral transmission includes both virus-infected mononuclear cells, which pass the infecting virus to other cells in a covert manner, as well as via free virus transmission. 3) The establishment of a latent viral infection. 4) The ability of the virus to evade the immune responses in the central nervous system due to the blood-brain barrier. 5) The complexity and variation of the pathology of HIV

infection in different individuals. 6) The inability of a natural infection to one strain of HIV to protect an individual from being infected with another strain of HIV (Machuca *et al.* Intervirology 1998, see discussion). These obstacles establish that the contemporary knowledge in the art would not allow one of skill in the art to use the claimed method to treat HIV infection without undue experimentation. Furthermore, it is well known in the art that individuals infected with HIV produce neutralizing antibodies to the virus, yet these antibodies are not protective and do not prevent the infection from progressing to its lethal conclusion. Applicants have not provided any convincing evidence that their claimed method is useful as a therapeutic for HIV infection and have not provided sufficient guidance in to allow one skilled in the art to practice the claimed invention without undue experimentation. In the absence of such guidance and evidence in light of the high degree of unpredictability in the art regarding which structural features are required in order to provide treatment or protection, the absence of working examples directed to the same, the complex nature of the invention, the specification fails to provide an enabling disclosure.

There is insufficient guidance in the specification as to how to make and/or use instant invention. Undue experimentation would be required of one skilled in the art to practice the instant invention. See In re Wands 8 USPQ2d 1400 (CAFC 1988).

Applicant's arguments in the amendment filed 2/2/06 have been fully considered, but are not persuasive.

Applicant's arguments are of record on pages 5-8 of Applicant's said amendment.

It is the Examiner's position with respect to Applicant's arguments to the disclosed used being for elicitation of an immune response rather than for treatment, that although the instant claim recites eliciting an immune response, the disclosed used for the claimed method is treatment or vaccination. Applicant's other arguments are moot in light of the new rejection.

There is insufficient guidance in the specification as to how to practice the method of the instant invention. Undue experimentation would be required of one skilled in the art to practice the instant invention. See In re Wands 8 USPQ2d 1400 (CAFC 1988).

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 1, 2, 6-8, 11, 12 and 14-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,942,607 (IDS reference) in view of Kaufmann *et al* (Cell. Immunol. 1996, 169/2 246-251, of record), admitted prior art in the specification on page 37 at lines 7-18, Rock *et al* (PNAS USA 89: 8918-8922, 1992, IDS reference), U.S. Patent No. 5,738,852 (of record), WO 98/04705 and the CAPLUS Accession No. 1998: 106018 summary of WO 98/04705 (both of record), U.S. Patent No. 6,338,947 (of record), U.S. Patent No. 6,045,802 (of record) and Harlow and Lane (Antibodies: A Laboratory Manual1988, page 104).

U.S. Patent No. 5,942,607 discloses using nucleic acid molecules encoding B7 co-stimulatory molecules such as B7-1, B7-2 or B7-3 to enhance the immunogenicity of a mammalian cell such as an APC, by transfecting the said cells with the said nucleic acid molecules and sequentially pulsing with an appropriate peptide or protein pathogen-related antigen to enhance T cell activation and immune stimulation. U.S. Patent No. 5,942,607 discloses transfecting mammalian cells with the said nucleic acid molecule comprising a regulatory sequence *in vivo* via gene therapy techniques. U.S. Patent No. 5,942,607 discloses administering therapeutically active amounts by injection such as via subcutaneous, topical or intravenous routes. U.S. Patent No. 5,942,607 discloses use of the nucleic acid molecules encoding B7-1, B7-2 or B7-3 in anti-viral therapy to activate and generate $CD8^+$ CTL. U.S. Patent No. 5,942,607 discloses cDNA or RNA encoding B7 co-stimulatory molecules. U.S. Patent No. 5,942,607 discloses pharmaceutical carriers (especially column 3 at lines 34-60, column 8 at lines 4-17 and lines 59-67, column 15 at lines 46-62, column 18 at lines 66-67, column 19 at lines 1-18, column 20 at lines 10-33, and Abstract).

U.S. Patent No. 5,942,607 does not disclose *in vivo* administration of a *non-viral vector* comprising a nucleic acid molecule encoding a B7 co-stimulatory molecule coordinately, *i.e.,* separately and sequentially, to closely adjacent sites, with a peptide or protein antigen comprising one or more T cell epitopes, including wherein the peptide antigen comprises at least nine contiguous amino acid residues of an HPV antigenic protein.

Kaufman *et al* teach that HPV E7 expressing cells fail to induce an effective CTL response due to a lack of expression of co-stimulatory molecules such as CD80 (B7.1). Kaufman *et al* teach that introduction and expression of B7.1 gene in cervical carcinoma cells expressing HPV E7 renders the cells more immunogenic, that CTL induced against the said cells can lyse the parental tumor cells and that it is expected that these CTL will specifically lyse the tumor cells *in vivo*.

The prior art admission in the specification on page 37 at lines 7-18 is that direct injection of naked DNA expression vectors into vertebrate tissues has been shown to result in the uptake of DNA and long-term expression of the protein encoded by the DNA. Applicant discloses the prior art references at lines 14-18. One of the said prior art references, Fynan *et al* teach that epidermal, mucosal, intramuscular and intravenous routes of administration can be used for DNA vaccines (especially Discussion section).

Rock *et al* teach that peptides of optimal length that bind to class I MHC molecules are 8-10 amino acid residues, *i.e.*, they may be $CD8^+$ CTL epitopes if they are recognized by the said CTL.

U.S. Patent No. 5,738,852 discloses inducing partial immunity by administering recombinant polynucleotides, including in the form of non-viral vectors or naked DNA or RNA operably linked to regulatory elements for expression, encoding an immunostimulatory factor such as B7.1 and/or a target antigen polypeptide from a viral protein (entire document, especially Abstract, claims, column 4 at lines 45-67, column 6 at lines 31-32, column 9 at lines 40-46, column 10 at lines 36-46, column 13 at lines 41-67, and claims). U.S. Patent No. 5,738,852 discloses administration by any suitable means known in the art including by parenteral means, *i.e.,* such as "subcutaneous" recited in instant claim 15. U.S. Patent No. 5,738,852 discloses that separate polynucleotides can encode the antigenic polypeptide and the co-stimulatory molecule, each is mixed with a suitable excipient and the number and timing of doses is determined by routine methods known to those of skill in the art. U.S. Patent No. 5,738,852 discloses that the immune response that ensues results from the expression of both polypeptides in an APC in the individual (especially abstract).

WO 98/04705 and the CAPLUS Accession No. 1998: 106018 summary of the WO 98/04705 document teach a pharmaceutical composition for treating a HPV infection comprising HPV E7 polypeptides and a co-stimulatory molecule B7.1 or a recombinant vector encoding the polypeptides.

U.S. Patent No. 6,338,947 discloses that antigenic proteins or peptides for use in vaccines may be administered in combination with an appropriate adjuvant or in the form of genetic constructs. U.S. Patent No. 6,338,947 discloses that a plurality of MHC class I and/or MHC class II binding antigenic peptides linked together or nucleic acid molecules encoding them may be administered via intravenous, intradermal or subcutaneous routes. U.S. Patent No. 6,338,947 discloses that the proteins or peptides may be combined with costimulatory molecules, or adjuvants and/or carriers such as a saponin, GM-CSF, interleukin, emulsifying oils or heat shock proteins (especially column 11 at lines 25-39 and column 12 at lines 11-21).

U.S. Patent No. 6,045,802 discloses that using an admixture of vector encoding recombinant antigen and vector encoding recombinant-B7 costimulatory molecule can lead to coinfection and coexpression on APCs so as to enhance specific T cell responses, and that it is advantageous to use separate vectors so that the vector encoding B7-costimulatory molecule can be used with other antigens associated with a tumor or disease agent for enhancement of an immune response (especially Example 3).

Harlow and Lane teach that subcutaneously injected immunogens will drain quickly into the local lymphatic system and become concentrated in the lymph nodes closest to the injected sites (page 104).

It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to have used the teaching of the enhancement of immune response to antigen by coordinate B7 costimulatory molecule expression as per the disclosure of U.S. Patent No. 5,942,607, Kaufman *et al*, U.S. Patent No. 5,738,852 and U.S. Patent No. 6,045,802 by administering the co-stimulatory molecule(s) disclosed by U.S. Patent No. 5,942,607, U.S. Patent No. 5,738,852, and taught by Kaufman *et al*, WO 98/04705 and CAPLUS Accession No. 1998: 106018 *in vivo* as a nucleic acid molecule as disclosed by U.S. Patent No. 5,942,607 in the form of a non-viral vector such as those taught by the prior art admitted references disclosed in the instant specification on page 37 at lines 7-18, including as taught by Fynan *et al*, and as disclosed by U.S. Patent No. 5,738,852 by parenteral means such as subcutaneously, coordinately to closely adjacent sites that would drain into the local lymphatic system as taught by Harlow and Lane with a polypeptide antigen(s) as disclosed by U.S. Patent No. 5,942,607 or with a polyepitope peptide as disclosed by U.S. Patent No. 6,338,947 in order to "pulse" the APC with antigen as disclosed by U.S. Patent No. 5,942,607, said antigen such as the HPV E7 polypeptide taught by Kaufman *et al* or the pathogen-related antigen(s) disclosed by U.S. Patent No. 5,942,607, and to administer them as peptides that comprise CTL epitopes of 8-10 amino acid residues as taught by Rock *et al* in conjunction with adjuvants or carriers such as disclosed by U.S. Patent No. 6,338,947.

One of ordinary skill in the art at the time the invention was made would have been motivated to do this in order to enhance CTL response because U.S. Patent No. 5,942,607 discloses that co-stimulatory molecules can be administered *in vivo* as nucleic acid molecules that encode them in gene therapy and the APC are to be subsequently pulsed with antigen in order to enhance immune response via $CD8^+$ CTL, Kaufman *et al* teach that HPV E7 expressing cells fail to induce an effective CTL response due to a lack of expression of co-stimulatory molecules such as CD80 (B7.1), and the prior art admission in the specification teaches that direct injection of naked DNA expression vectors into vertebrate tissues has been shown to result in the uptake of DNA and long term expression of the protein encoded by the DNA, and Fynan *et al* teach multiple routes of administration can be used to administer DNA vaccines, WO 98/04705 and the CAPLUS Accession No. 1998: 106018 teach and U.S. Patent No. 5,738,852 discloses pharmaceutical compositions comprising B7 co-stimulatory molecules or nucleic acid molecules encoding them, and U.S. Patent No. 5,738,852 discloses inducing partial immunity by administering recombinant polynucleotides, including in the form of non-viral vectors or naked DNA or RNA operably linked to regulatory elements for expression. One of ordinary skill in the art at the time the invention was made would have been motivated to do this, particularly when it was desirable to use an adjuvant with the peptide antigen(s) because U.S. Patent No. 6,338,947 discloses that antigenic proteins or peptides for use in vaccines may be administered in combination with an appropriate adjuvant or in the form of genetic constructs and that the proteins or peptides may be combined with costimulatory molecules, or adjuvants and/or carriers such as a saponin, GM-CSF, interleukin, emulsifying oils or heat shock proteins. In addition, one of ordinary skill in the art at the time the invention was made would have been motivated to administer the peptide antigen(s) at a closely adjacent site to the one used to inject the polynucleotide encoding the costimulatory molecule because U.S. Patent No. 5,738,852 discloses that the immune response that ensues results from the expression of both polypeptides in an APC in the individual and Harlow and Lane teach that subcutaneously injected immunogens will drain into the local lymphatic system and will become concentrated in the lymph nodes closest to the injected sites. Additional motivation is derived from U.S. Patent No. 6,045,802 which discloses that using an admixture of vector encoding recombinant antigen and vector encoding recombinant-B7 costimulatory molecule can lead to coinfection and cospression on APCs so as to enhance specific T cell responses, *i.e.,* injection of two the two molecules separately led to coinfection and enhanced immune response.

With regard to the inclusion of claim 8 in the instant rejection, the minimal peptide epitope that binds to an HLA class I molecule to induce a CTL response is from 8-10 amino acid residues in length as taught by Rock *et al.* For example, peptides that bind to a common MHC class I molecule in humans, HLA-A2.1, are of minimal length 9 amino acid residues.

Applicant's arguments in Applicant's amendment filed 2/2/06 have been fully considered, but are not persuasive.

Applicant's arguments are of record in the said amendment on pages 8-11.

It is the Examiner's position with regard to Applicant's request for clarification as to where US 5,942,607 discloses transfecting APC with nucleic acid encoding B7 and sequentially pulsing with peptide, that this teaching is found at column 3, lines 34-47. US 5,942,607 further discloses transfecting mammalian cells *ex vivo* with B7 encoding nucleic acid molecules and then introducing them into the host mammal, or alternatively, the APC can be transfected with the gene *in vivo* via gene therapy (column 3, lines 48-60).

Applicant argues that US 5,942,607 does not actually demonstrate such nucleic acid transfection coupled with peptide pulsing, particularly in an *in vivo* context, and that while this transfection and pulsing *in vitro* might be expected to get the two agents into the same cell, the ordinarily skilled artisan would view *in vivo* administration of two agents as involving additional factors that affect diffusion and sequestration of the agents, and therefore uptake of the agents by cells. Applicant cites Shirai *et al* (Exhibit A, of record) for the teaching that administering a Th peptide and a CTL epitope peptide as an admixture did not work to induce CTL activity; they required covalent linkage, suggesting that the unlinked peptides did not reach the same APC.

It is the Examiner's position that Shirai *et al* teaches two other studies wherein the mixtures of Th and CTL epitope peptides were sufficient to induce CTL response *in vivo*, and wherein covalent linkage was not obligatory. It is the Examiner's further position that Harlow and Lane teach that immunogens injected subcutaneously will drain quickly into the local lymphatic system and will become concentrated in the lymph nodes closest to the injected sites. It is the Examiner's position that the combined art references teach injection of nucleic acid encoding B7 costimulatory molecule(s) coordinately with a peptide or protein antigen, not the injection of a Th epitope and a CTL epitope, and so the teaching of Shirai *et al* is not applicable to the situation under discussion. One of ordinary skill in the art would expect that the proportion of DNA required to transfect an APC and transform it into an APC expressing a B7 costimulatory molecule would not be on the same order of magnitude for administering Th peptide with a CTL epitope peptide to produce the same result, *i.e.,* a very small number of plasmid DNA required to transfect skin or lymph node APC for effective transfection of a costimulatory molecule. One of ordinary skill in the art at the time the invention was made would have been motivated to transform as many APC as possible.

It is the Examiner's further position that U.S. Patent No. 6,045,802 discloses using an admixture of vector encoding recombinant antigen and vector encoding recombinant-B7 costimulatory molecule can lead to coinfection and coexpression on APCs so as to enhance specific T cell responses, and that it is advantageous to use separate vectors so that the vector encoding B7-costimulatory molecule can be used with other antigens associated with a tumor or disease agent for enhancement of an immune response, thus providing motivation to avoid physically linking the B7-encoding nucleic acid and the antigen-encoding nucleic acid.

It is the Examiners position that one of ordinary skill in the art would have had a reasonable expectation of success in producing the claimed invention given the art teachings for the reasons enunciated supra.

6. No claim is allowed.

7. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Marianne DiBrino whose telephone number is 571-272-0842. The Examiner can normally be reached on Monday, Tuesday, Thursday and Friday.

If attempts to reach the examiner by telephone are unsuccessful, the Examiner's supervisor, Christina Y. Chan, can be reached on 571-272-0841. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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